

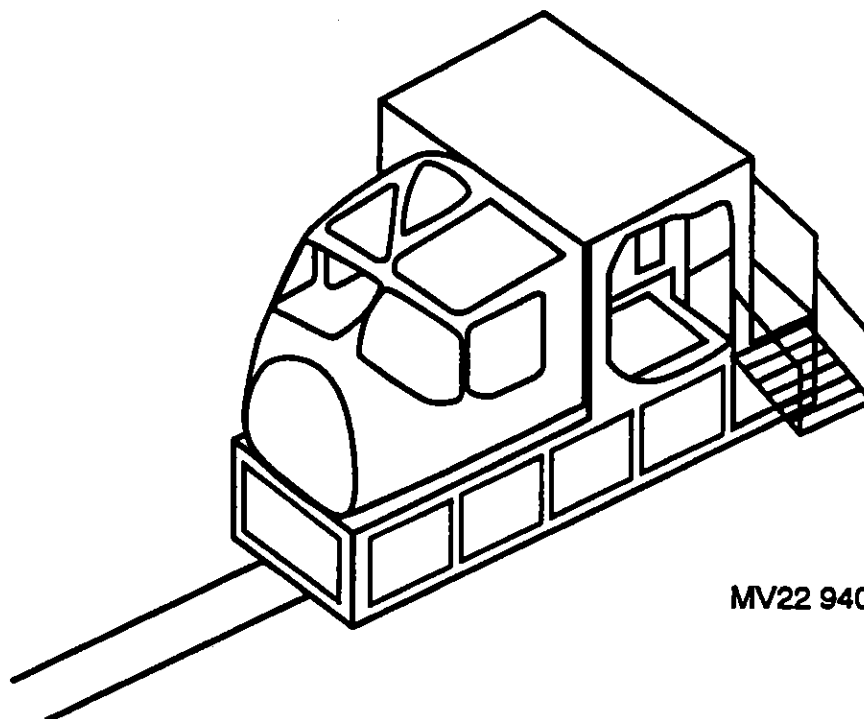
SUMMARY OF MV-22A AIRCRAFT SYSTEMS TRAINER

July 1994

Device 2C71

NAVAL TRAINING SYSTEMS CENTER

ORLANDO, FLORIDA



MV22 94040602

TRAINING CATEGORY:

Flight Simulator

ORIGINATING AGENCY:

The United States Marine Corps.

SECURITY CLASSIFICATION of DEVICE:

Device 2C71 is unclassified.

PURPOSE of DEVICE:

Device 2C71 simulates all ground takeoff, flight, operational and landing characteristics of the MV-22A Tilt Rotor aircraft.

INTENDED USE:

To provide training in the development of pilot skills as well as techniques to efficiently and safely fly the MV-22A in the medium assault troop transport mission.

FUNCTIONAL DESCRIPTION:

The Aircraft Systems Trainer (AST) simulates the aircraft performance during cockpit pre-flight, engine start, vertical/stationary takeoff and landing (V/STOL), navigation, landing engine shut down and cockpit postflight. An audio system provides aural cueing.

The Student Station is a full scale replica of the aircraft cockpit. Device 2C71 has positions for both pilot and copilot, an instructor and two observers. The students (pilot and copilot) perform the functions of flying, and the MV-22 AST provides interactive feedback through the various cueing systems. Simulated aircraft controls provide the input mechanism for the device. Cueing systems provide the feedback to the students.

A unique Instructors Station is located directly behind the student stations. This permits the instructor to evaluate both students as well as their crew coordination. The instructor controls the training scenario through a dual flat panel display. This display is menu driven through programmable switches located on the periphery of the displays.

PHYSICAL INFORMATION:

There are 21 units identified in the Trainer Configuration Report. These units are located in four areas. The floor space occupied by the device is listed below.

Sizes:

Trainee/Instructor area - 32' x 40', with a 15' ceiling.

Computer Room - 21' x 21', with a 9' ceiling.

Mechanical Room - 22' x 20', with a 9' ceiling.

Software Support Center - 8' x 12', with a 9' ceiling.

Weights:

The empty weight of the entire device is 11,600 pounds.

EQUIPMENT REQUIRED (NOT SUPPLIED):

none.

POWER REQUIREMENTS:

The device power requirements are listed below.

208/120 volt wye, 60 Hz.

Simulation Equipment - 90 amperes per phase, with a 125 ampere trip current.

480/277 volt wye, 60 Hz.

Cockpit Air Conditioner - 15 amperes per phase, with a 30 ampere trip current.

400 Hertz Converter - 30 amperes per phase, with a 50 ampere trip current.

Control Loading HPU - 26 amperes per phase, with a 50 ampere trip current.

PUBLICATIONS FURNISHED:

Operation and Maintenance Instructions with Parts Catalog, MV-22A Aircraft Systems Trainer, Device 2C71, NTSC P-6763 (U)

PERSONNEL:

Instructor: Instructor Pilot.

Operator: Instructor operated.

Trainees: Two per training sortie.

Maintenance: Two simulator technicians to support an 8 hour training day.

CONTRACT IDENTIFICATION:

Manufactured by Hughes Training Inc., Herndon Virginia, under subcontract to Bell Helicopter Textron Inc., Fort Worth, TX. The Prime Contract number is N00019-85-C-0145.

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